

under the name of "KB" board. This wall is provided with an air intake aperture 14 shown in Fig. 4, and the rear wall of the compartment is provided with an outlet aperture 18 shown in Fig. 2. I provide an air intake duct supported as shown in Fig. 3 below the bottom wall 12. This duct has its wall formed of multi-ply material. The outer ply 18 is a relatively inert dense sheet which may be "KB," above specified, and which forms a relatively unresponsive diaphragm and is self-supporting. It is of thermoplastic character and may be shaped as shown and secured to the bottom wall 12 as illustrated in Fig. 3. The multi-ply wall also includes a relatively thick liner layer 20 of loose, porous sound absorbing material. Various types of sound absorbing materials are available and may be used. Generally they are characterized as of a fibrous character and of light weight and highly porous and are good absorbing materials for sound of high frequency. A loose, fluffy highly porous felt is suitable.

An insulation product known as "Waddex" and comprising a multiplicity of filmy tissue-like layers of cellulose material is a suitable product. Another commercial product known as "Seapak," which is loose and highly porous, is also suitable. This sound absorbing layer is secured to the relatively inert layer 18 and may be adhesively secured thereto. It is supported thereby and is shown as overlying the same throughout the walls of the duct. This duct overlies the bottom wall 12 and extends away from the inlet opening 14 and toward the rear wall of the refrigerator, as shown, and has a substantial length.

Upon the rear wall of the refrigerator there is provided an outlet duct of a similar character which communicates with the outlet opening 18. This duct likewise has an outer wall 18 of the same relatively dense inert type of material and a liner 20 of a similar sound absorbing material. The rear wall of the refrigerator is not shown but is fashioned of this same inert material 12 as is the bottom wall and this exhaust duct is, therefore, a duct lined on three sides only and having the multi-ply wall on such three sides as

shown in Fig. 4. It extends, however, for a substantial distance up the rear wall of the refrigerator and due to its length it also functions to effectively minimize the disagreeable low frequency sound which arises within the mechanical compartment. Each of these ducts because of the character of the multi-ply wall, namely, the one layer of dense inert sound damping material which is self-supporting and the other layer of a porous highly absorbent material which overlies the dense inert diaphragm layer, serves very efficiently to minimize and reduce the low frequency sound which arises within the mechanical compartment.

What I claim:

A refrigerator having a mechanical compartment situated in its lower portion and provided with side walls, the bottom wall of said compartment having an air intake therethrough adjacent to the front of the refrigerator, an air duct communicating with said air intake and extending along underneath said bottom wall and communicating with the atmosphere adjacent to the rear of the refrigerator, said air duct having a wall formed of multi-ply material the outer ply of which is formed of relatively inert rigid sound damping fibrous material wherein the fibers are held together by an adhesive binder and the inner ply of which is formed of relatively porous sound absorbing fibrous material wherein the fibers are loosely integrated, the rear wall of said compartment having an air outlet opening adjacent to the bottom wall, an air duct communicating with said outlet opening and extending up along the rear wall of the refrigerator and communicating with the atmosphere at a point spaced substantially above said air outlet, said air duct being formed of multi-ply material the outer ply of which is formed of relatively inert rigid sound damping fibrous material wherein the fibers are held together by an adhesive binder and the inner ply of which is formed of relatively porous sound absorbing loosely integrated fibrous material secured to and supported by the outer ply.

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